

Stated Meeting, February 5, 1897.

Vice-President, Dr. PEPPER, in the Chair.

Present, twenty-five members.

A letter was received from Prof. Goldwin Smith, resigning membership in the Society. The resignation was accepted.

The Standing Committees for the coming year, as appointed by the President, under resolution of the Society, were then announced as follows :

Finance.—William P. Tatham, William V. McKean, Philip C. Garrett.

Hall.—J. Sergeant Price, William A. Ingham, Joseph M. Wilson.

Publication.—Daniel G. Brinton, George H. Horn, Persifor Frazer, I. Minis Hays, Frederick Prime.

Library.—Edwin J. Houston, Frederick Prime, William H. Greene, Albert H. Smyth, Thomas Hewson Bache.

Michaux Legacy.—Thomas Meehan, William M. Tilghman, Angelo Heilprin, William Powell Wilson, Arthur E. Brown.

Henry M. Phillips Prize Essay Fund.—William V. McKean, Craig Biddle, Joseph C. Fraley, C. Stuart Patterson, Mayer Sulzberger, the President, the Treasurer.

Programme.—William Pepper, Persifor Frazer, William A. Ingham, Joseph C. Fraley, I. Minis Hays.

The death was announced of Horatio Hale, of Clinton, Ont., December 29, 1896.

Prof. E. D. Cope presented a paper on "New Paleozoic Vertebrata from Illinois, Ohio and Pennsylvania," which was read by title.

The following papers constitute the discussion prepared for this meeting by those invited to present the various aspects of the subject selected, viz., "The Origin and Chemical Composition of Petroleum."

Prof. Sadtler read a paper on "The Genesis and Chemical Relations of Petroleum and Natural Gas."

Prof. Peckham, of Ann Arbor, read a paper on "The Nature and Origin of Petroleum."

A communication from Mr. David T. Day was read, entitled "A Suggestion as to the Origin of Pennsylvania Petroleum."

The Secretary read by title two papers by Prof. Phillips on "The Genesis of Natural Gas and Petroleum," and on "The Occurrence of Petroleum in the Cavities of Fossils."

Prof. Mabery then presented his views on the composition of Petroleum.

Remarks in discussion were then made by Dr. Sadtler, Mr. Wharton, Prof. Mabery and Prof. Peckham, and Prof. Mabery closed the discussion with a warm recognition of Dr. Sadtler's and Prof. Peckham's work.

THE GENESIS AND CHEMICAL RELATIONS OF PETROLEUM AND NATURAL GAS.

BY SAMUEL P. SADTLER, PH.D.

(Read February 5, 1897.)

Of natural products in the mineral kingdom, few have excited the interest of geologists and chemists in the same degree as what in the broad sense we call bitumen. Occurring as it does in solid, liquid and gaseous condition in almost all parts of the world, and in amount varying from the slight bituminous impregnation of shales, limestones, sandstones, and other rocks to the great petroleum deposits which are now worked in this country and Russia, it has furnished ever-new and interesting material for scientific study and discussion.

This widespread occurrence and the varied forms under which it is brought to our attention would be quite sufficient to explain its interest from a geological point of view, but when we add to this that in its main forms of production, petroleum and natural gas, chemists find represented those simplest forms of organic compounds, the hydrocarbons, we have an additional element of interest.